Selected Grants

SELECTED GRANTS

DIVISION OF SYNTHETIC CHEMISTRY
— Organoelement Chemistry —

Tokitoh, N.
Creation of Novel Catalysts Centered on the Coordination Diversity of Heavy Typical Elements
Grant-in-Aid for Scientific Research on Innovative Area "Stimuli-responsive Chemical Species for the Creation of Functional Molecules"
28 June 2012−31 March 2017

Tokitoh, N.
Electron-state Control of Aromatic Compounds Containing Heavier Group 14 Elements by Substituent introduction and Element Substitution
Grant-in-Aid for Scientific Research (B)
1 April 2013−31 March 2016

Tokitoh, N.
Synthesis and Properties of Alumoles Having an Aluminum–Halogen Bond
Grant-in-Aid for Challenging Exploratory Research
1 April 2014−31 March 2016

Tokitoh, N.
Synthesis and Properties of Phenyl Anion Analogs Containing Heavier Group 14 Elements
Grant-in-Aid for Scientific Research (B)
1 April 2016−31 March 2019

Sasamori, T.
Construction of [2]Ferrocenophanes Linked by π-Bond between Heavier Group 14 Elements and Control of Their Ring-opening Polymerization
Grant-in-Aid for Scientific Research on Innovative Area "Emergent Chemistry of Nano-scale Molecular Systems" and "New Polymeric Materials Based on Element-Blocks"
1 April 2013−31 March 2017

Sasamori, T.
Development of Transformations of Small Molecules and Multicomponent Couplings Utilizing Low-valent Compounds of Heavier Group 14 Elements
Grant-in-Aid for Scientific Research (B)
1 April 2015−31 March 2018

Sasamori, T.
Construction of d-π Electron Systems Containing Heavier Group 14 Elements and Their Functionalization
Grant-in-Aid for Challenging Exploratory Research
1 April 2015−31 March 2017

Mizuhata, Y.
Construction of Silicon-containing Dehydroannulenes and Their Aromaticity and Antiaromaticity
Grant-in-Aid for Scientific Research (C)
1 April 2014−31 March 2017

— Structural Organic Chemistry —

Murata, Y.
Synthesis of Tailor-made Nanocarbons and Their Application to Electronic Devices
Grant-in-Aid for Scientific Research (A)
1 April 2011−31 March 2016

Murata, Y.
Molecular Interface Science of π-Conjugated Carbon Complexes on Non-Equilibrated States
PRESTO (Precursory Research for Embryonic Science and Technology), JST
1 October 2012−31 March 2016

Murata, Y.
Spherical π-Figuration Based on Functionalization of Sub-Nano Space
Grant-in-Aid for Scientific Research on Innovative Areas "π-System Figuration"
1 April 2015−31 March 2017

Murata, Y.
Functional Molecular Systems Based on Dynamic Behavior of Active Species
Grant-in-Aid for Scientific Research on Innovative Areas "Stimuli-responsive Chemical Species for the Creation of Functional Molecules"
1 April 2015−31 March 2017

Murata, Y.
Creation of New Reactive Chemical Species by the Ultimate Steric Protection
Grant-in-Aid for Challenging Exploratory Research
1 April 2015−31 March 2017

Wakamiya, A.
Development of Organic Dyes Based on Fine Tuning of π-Orbitals using DFT Calculations
PRESTO (Precursory Research for Embryonic Science and Technology), JST
1 October 2010−31 March 2016

Abbreviations and acronyms

JST : Japan Science and Technology Agency
MEXT : Ministry of Education, Culture, Sports, Science and Technology
METI : Ministry of Economy, Trade and Industry
NEDO : New Energy and Industrial Technology Development Organization

Wakamiya, A.
Creation of Wireless Electric Power Supply
Center of Innovation Program (COI)
1 October 2013−31 March 2022

Wakamiya, A.
High Dimensional Structural Control of π-Conjugated Systems and Their Functionalization
Grant-in-Aid for Scientific Research (B)
1 April 2014−31 March 2017

Wakamiya, A.
Development of High Performance and Environmentally Friendly Perovskite Type Solar Cells
Advanced Low Carbon Technology Research and Development Program (ALCA)
16 November 2016−31 March 2021

Murata, M.
Organization of Nanocarbon Molecules Based on Metal Coordination
Grant-in-Aid for Challenging Exploratory Research
1 April 2014−31 March 2016

Murata, M.
Development of Neutral Thermoelectric Materials Based on π-Extended Metal-Bis(dithiolene) Complexes
PRESTO (Precursory Research for Embryonic Science and Technology), JST
1 October 2016−31 March 2020

Murata, M.
Exploratory Studies on Materials for Energy Conversion Based on Efficient Synthesis of π-Conjugated Multimetallic Complexes
Grant-in-Aid for Challenging Exploratory Research
1 April 2016−31 March 2018

Murata, M.
Development of Functional Materials Based on Efficient Synthesis of PAHs Containing Pentagon Rings
Grant-in-Aid for Scientific Research (B)
1 April 2016−31 March 2019

Murata, M.
Exploration of Functions of Cyclopenta-Fused Polycyclic Aromatic Hydrocarbons CP-PAHs
Research Encouragement Grants, The Asahi Glass Foundation
1 April 2016−31 March 2018

— Synthetic Organic Chemistry —

Kawabata, T.
Regioselective Molecular Transformation Based on Organocatalytic Molecular Recognition
Grant-in-Aid for Scientific Research on Innovative Area
1 October 2011−31 March 2015

Kawabata, T.
Regioselective Molecular Transformation of Multifunctionalized Molecules
Grant-in-Aid for Scientific Research (S)
1 April 2014−31 March 2018

Furuta, T.
Direct Intra and Intermolecular Aldol Reaction by Catalytic Discrimination of Aldehydes
Grant-in-Aid for Scientific Research (C)
1 April 2014−31 March 2017

Ueda, Y.
Site-Selective Molecular Transformation Promoted by Anion-Exchange of Cationic Intermediates in Nucleophilic Catalysis
Grant-in-Aid for Young Scientists (B)
1 April 2015−31 March 2017

Ueda, Y.
Synthesis of Carbohydrate-Related Middle Molecules Based on Sequential Site-Selective Functionalization
Grant-in-Aid for Scientific Research on Innovative Areas
1 April 2016−31 March 2018

Yoshida, K.
Total Synthesis of Natural Products by Using Organocatalytic Asymmetric Construction of All-carbon Quaternary Stereocenter
Grant-in-Aid for Young Scientists (B)
1 April 2016−31 March 2019

— Advanced Inorganic Synthesis —

Teranishi, T.
Establishment of Deeply Penetrating Photoacoustic Imaging Technology Based on Fucntional Probes: Design and Synthesis of Activatable Probes and Development of in vivo Imaging Technology
Industry-Academia Collaborative R&D Programs, Japan Agency for Medical Research and Development
1 December 2011−31 March 2017

Teranishi, T.
Synthesis of Magnetic Nanoparticles for Creating Novel Nanocomposite Magnetic Materials
Elements Strategy Initiative, MEXT
1 July 2012−31 March 2022

Teranishi, T.
Research on Nanoscale Phase-Controlled Nanocomposite Magnets
Mirai Kaitaku Research Project, NEDO
1 October 2012−31 March 2022

Teranishi, T.
Development of Green Sustainable Chemical Process
Mirai Kaitaku Research Project, NEDO
1 November 2012−31 March 2022

Teranishi, T.
Novel Development of Asymmetry Chemistry in Inorganic Nanocrystals
Grant-in-Aid for Scientific Research on Innovative Areas
30 June 2016−31 March 2021

Teranishi, T.
Formation of Novel Metallic Phase Nanoparticles and Development of Their Catalytic Properties
Grant-in-Aid for Scientific Research (B)
1 April 2016−31 March 2019

Sakamoto, M.
Investigation on the Gain-of-function Process by the Formation of Nanoparticle Assemblage Using DNA Origami
SPIRITS (Supporting Program for Interaction-based Initiative Team Studies)
1 April 2015−31March 2017

Sato, R.
Development of The Novel and Versatile Alloying Process via Nanosized Phosphorus Compounds
Grant-in-Aid for Challenging Exploratory Research
1 April 2015−31March 2017

Saruyama, M.
Orientational Control and Structure-specific Properties of Heterostructural Nanoparticles
Grant-in-Aid for Research Activity Start-up
1 October 2015−31March 2017

DIVISION OF MATERIALS CHEMISTRY
— Chemistry of Polymer Materials —

Tsujii, Y.
Reinforcement of Resiliency of Concentrated Polymer Brushes and Its Tribological Applications-Development of Novel "Soft and Resilient Tribology (SRT)" System
ACCEL Program, JST
1 September 2015−31 March 2019

Tsujii, Y.
Super Lubrication of Novel Nano-Brushes
Advanced Environmental Materials of Green Network of Excellence (GRENE) program, MEXT
6 December 2011−31 March 2016

Tsujii, Y.
Development of High-Performance Li-ion Batteries using High-capacity, Low-cost Oxide Electrodes
NEDO Project for Development of Novel Technology in Li-ion Batteries
1 October 2012−27 February 2017

Ohno, K.
Development of Ionic Liquid-Containing Blend Films
PRESTO (Precursory Research for Embryonic Science and Technology), JST
1 October 2013−31 March 2017

Sakakibara, K.
Construction of Cellulosic Bottlebrushes with Regioselectively Substituted Side Chains
Grant-in-Aid for Young Scientist (B)
1 April 2016−31 March 2018

— Polymer Controlled Synthesis —

Yamago, S.
New Organic Chemistry and Material Science of Curved π-Conjugated Molecules
Grant-in-Aid for Scientific Research (S)
1 April 2016−31 March 2021

Yamago, S.
Highly Value-added Polymer Material Created by New Living Radical Polymerization Agent
Next Generation Technology Transfer Program (NexTEP), JST
1 April 2014−31 March 2020

— Inorganic Photonics Materials —

Mizuochi, N.
High Sensitive and High Resolution Quantum Nano-sensor by Diamond
Grant-in-Aid for Scientific Research (A)
1 April 2016−31 March 2021

Mizuochi, N.
Innovative Magnetic Sensor Based on Nano-electronics of Carbon Materials
Core Research for Evolutional Science and Technology (CREST), JST
1 April 2014−31 March 2019

Mizuochi, N.
Research on Diamond Quantum Information Device
TORAY Science and Technology Research Grant
1 January 2016−31 March 2018

Morishita, H.
Electrical Coherent Detection of Electron Spin of NV Centers in Diamond
Grant-in-Aid for Encouragement of Young Scientists (B)
1 April 2016−31 March 2018

— Nanospintronics —

Ono, T.
Spin-orbitronics and Device Application
New Research Projects under Specially Promoted Research
1 April 2015−31 March 2020

DIVISION OF BIOCHEMISTRY
— Biofunctional Design-Chemistry —

Futaki, S.
New Strategies for Intracellular Delivery of Biopharmaceuticals
Grant-in-Aid for Science Research (A)
1 April 2015−31 March 2018

Imanishi, M.
Construction of Strategies for Sequence Specific Epigenomic Manipulation
Grant-in-Aid for Science Research (B)
1 April 2016−31 March 2019

— Chemistry of Molecular Biocatalysts —

Watanabe, B.
Synthesis of γ-Glutamyl Transpeptidase-Specific Chemical Probes and Their Application to Cancer Immunotherapy
Grant-in-Aid for Young Scientists (B)
1 April 2015−31 March 2017

— Molecular Biology —

Aoyama, T.
Plant Epidermal Cell Differentiation Regulated by the Transcription Factor GL2
Grant-in-Aid for Scientific Research (B)
1 April 2016−31 March 2020

Aoyama, T.
Mechanism for Establishment of Planar Polarity in Plant Cell Morphogenesis
Grant-in-Aid for Scientific Research (C), Special Field
1 April 2016−31 March 2019

— Chemical Biology —

Uesugi, M.
Control and Analysis of Cells by Synthetic Small Molecules
Grant-in-Aid for Scientific Research (S)
30 May 2014−31 March 2019

Uesugi, M.
Chemical Biological Exploration of New Functions of Endogenous Lipid-related Molecules
AMED-CREST
1 October 2014−31 March 2020

DIVISION OF ENVIRONMENTAL CHEMISTRY
— Molecular Materials Chemistry —

Kaji, H.
Structure and Function of Organic Thin-Film Solar Cells: Specially-Shaped Polymers and Hierarchical Structure Analysis
Grant-in-Aid for Scientific Research (A)
1 April 2013−31 March 2016

Kaji, H.
Adachi Molecular Exciton Engineering Project
ERATO (Exploratory Research for Advanced Technology), JST
1 April 2014−31 March 2018

Fukushima, T.
Solid-State NMR Analysis of Bulk Heterostructures toward High-efficiency Organic Solar Cells
Grant-in-Aid for Young Scientists (B)
1 April 2014−31 March 2016

Fukushima, T.
Study on Weather Resistance of Solution-Processable Organic Solar Cells
Suga Weathering Technology Foundation
1 April 2015−31 March 2016

Shizu, K.
A Method of Visualizing Radiative and Non-Radiative Decays and Its Applications to Design for Deep-Blue Organic Emitters
Grant-in-Aid for Young Scientists (B)
1 April 2015−31 March 2017

Kaji, H.
Analysis of Organic Photovoltaics Materials by Solid-State Dynamic Nuclear Polarization
SPIRITS (Supporting Program for Interaction-based Initiative Team Studies)
1 April 2015−31 March 2017

Fukushima, T.
A Fundamental Study on Weather Resistance of Solution-Processed Organic Solar Cells by Solid-State NMR
Grant-in-Aid for Scientific Research (C)
1 April 2016−31 March 2018

— Hydrospheric Environment Analytical Chemistry —

Sohrin, Y.
Development of Novel Proxies for Paleoceanography on the Precise Analysis of Stable Isotope Ratios of Heavy Metals
Grant-in-Aid for Challenging Exploratory Research
1 April 2014−31 March 2017

Sohrin, Y.
Development of Heavy Metal Stable Isotope Marine Chemistry to Understand Marine Environment and Ecosystems
Gtant-in-Aid for Scientific Research (A)
1 April 2015−31 March 2018

— Solution and Interface Chemistry —

Hasegawa, T.
Development of ROA Imaging and its Application to Visualization of Atropisomers for a Study of Fluoroorganic Chemistry
Grant-in-Aid for Scientific Research (A)
1 April 2015−31 March 2020

Hasegawa, T.
Development of Novel Analytical Techniques for Revealing Molecular Orientation of Adsorbed Molecules on a Rough Surface or on Nano Particles
Grant-in-Aid for challenging Exploratory Research
1 April 2014−31 March 2016

Hasegawa, T.
Development of a Novel Analytical Spectroscopy for Strategic Molecular Design of a Fluorine-containing Acryl Polymer Enabling Us to Overcome Environmental Regulations
Matching Planner Program: Cooperation Research with a Company
1 June 2016−31 March 2017

Shimoaka, T.
Development of Analytical Techniques for Studying the Structure and Property of a Polymer Influenced by Minute Water Molecules Involved in a Polymer Thin Film
Grant-in-Aid for Young Scientists (B)
1 April 2014−31 March 2017

— Molecular Microbial Science —

Kurihara, T.
Mechanism of Biogenesis of Membrane Microdomain Containing Polyunsaturated Fatty Acids in Bacteria and Its Physiological Functions
Grant-in-Aid for Scientific Research (B)
1 April 2015−31 March 2018

Kurihara, T.
Analysis of Cold-Adaptation Mechanism of Food Spoilage Bacteria and Its Application to Food Industry
Grant-in-Aid for Challenging Exploratory Research
1 April 2015−31 March 2017

Kawamoto, J.
Development of a Membrane Protein Production System by Using Tailor-made Membrane Vesicles Synthesized by Extremophiles
Grant-in-Aid for Challenging Exploratory Research
1 April 2016−31 March 2018

Ogawa, T.
Research on Acyltransferases that Create Heterogeneity of Bacterial Biomembranes
Grant-in-Aid for Research Activity Start-up
23 August 2015−31 March 2017

DIVISION OF MULTIDISCIPLINARY CHEMISTRY
— Polymer Materials Science —

Takenaka, M.
Photon and Quantum Basic Research Coordinated Development Program, JST
1 September 2013−31 March 2018

Takenaka, M.
Nano-Control Technologies for DSA Nano-Patterning
Nano Defect Management Project
1 July 2016−31 March 2018

Ogawa, H.
Development of Visualizing Method Through Cooperative Small Angle X-ray Scattering Coupled with Computed Tomography (SAXS-CT) and Information Science
Strategic Basic Research Programs, PRESTO (Precursory Research for Embryonic Science and Technology), JST
1 September 2016−31 March 2020

— Molecular Rheology —

Watanabe, H.
Relationship Between Chemical Structure and Extensional Behavior of Entangled Polymer Chain
Grant-in-Aid for Scientific Research (B)
1 April 2015−31 March 2018

Matsumiya, Y.
Experimental Test on the Dynamics of Telechelic Polymers
Grant-in-Aid for Scientific Research (C)
1 April 2015−31 March 2018

ADVANCED RESEARCH CENTER FOR BEAM SCIENCE
— Particle Beam Science —

Iwashita, Y.
Quantum Improvement of the Superconducting Acceleration Cavity Performance by the Laminated Film Structure
Grant-in-Aid for Challenging Exploratory Research
1 April 2014−31 March 2016

Iwashita, Y.
Fundamental Technology Development for High Brightness X-ray Source and the Imaging by Compact Accelerator
Photon and Quantum Basic Research Coordinated Development Program
1 April 2013−31 March 2017

— Laser Matter Interaction Science —

Sakabe, S.
Proof of Concept for Electron Optics Using Intense Laser-driven Surface Wave
Grant-in-Aid for Scientific Research (A)
1 April 2016−31 March 2019

Hashida, M.
Stable Formation of Advanced Functionality on Metal Surface Produced by High Electric Field of Laser Pulse
Grant-in-Aid for Scientific Research (C)
1 April 2016−31 March 2019

Hashida, M.
Advanced Research Program for Energy and Environmental Technologies/Manufacturing Technologies Development of High Quality Laser Material Processing for Inducing New Functionalities
New Energy and Industrial Technology Development Organization
4 January 2016−4 January 2017

Inoue, S.
Demonstration of Laser-driven Ultrafast and Intense Electron Source with Solid-plasma Hybrid Cathode
Grant-in-Aid for Encouragement of Young Scientists (B)
1 April 2016−31 March 2018

— Electron Microscopy and Crystal Chemistry —

Kurata, H.
Advanced Characterization Nanotechnology Platform at Kyoto University
Nanotechnology Platform Project, MEXT
2 July 2012−31 March 2022

Kurata, H.
State Analysis of Organic Nanomaterials by High-Resolution EELS
Grant-in-Aid for Challenging Exploratory Research
1 April 2016−31 March 2018

Haruta, M.
Electronic State Mapping Using Oxygen
Grant-in-Aid for Young Scientist (A)
1 April 2014−31 March 2018

Haruta, M.
Basic Research of Atomic Resolution Organic Crystal Image Using STEM
Grant-in-Aid for Challenging Exploratory Research
1 April 2014−31 March 2017

INTERNATIONAL RESEARCH CENTER FOR ELEMENTS SCIENCE
—Synthetic Organotransformation—

Nakamura, M.
Synthesis of Nitrogen-Containing Polycyclic Aromatic Compounds via Iron-catalyzed C-H Amination
Grant-in-Aid for Challenging Exploratory Research
1 April 2015−31 March 2016

Takaya, H.
Solution-Phase Characterization of Paramagnetic Metal Complex by X-ray Absorption Spectroscopy
Grant-in-Aid for Challenging Exploratory Research
1 April 2015−31 March 2017

Isozaki, K.
Development of Catalytic Multi-photon-excited Photoreactions in the Reaction Field Localizing Substrates and Excitation Sources
Grant-in-Aid for Scientific Research on Innovative Areas "Application of Cooperative Excitation into Innovative Molecular Systems with High-Order Photofunctions"
1 April 2015−31 March 2017

Iwamoto, T.
Development of Aromatic C-H Functionalization Base on Cation-π Interaction
Grant-in-Aid for Young Scientists (B)
1 April 2015−31 March 2017

— Advanced Solid State Chemistry —

Shimakawa, Y.
Solid-state Chemistry for Transition-metal Oxides: Exploring for New Materials with Novel Functionalities
JSPS Core-to-Core Program
1 April 2016−31 March 2020

— Organometallic Chemistry —

Ozawa, F.
Synthesis and Catalytic Properties of Stimulus-responsible Transition Metal Complexes Bearing Low-coordinate Phosphorus Ligands
Grant-in-Aid for Scientific Research on Innovative Areas "Stimuli-responsive Chemical Species for the Creation of Functional Molecules"
1 April 2012−31 March 2017

Ozawa, F.
Synthesis and Catalytic Applications of Non-innocent Phosphaalkene Ligands
Grant-in-Aid for Scientific Research (B)
1 April 2014−31 March 2017

Wakioka, M.
Development of Highly Efficient Catalytic Systems for Direct Arylation Polymerization based on Equilibrium between Active and Dormant Species
Grant-in-Aid for Young Scientists (B)
1 April 2015−31 March 2017

Ozawa, F.
Development of Highly Efficient Catalysts for Synthesizing of π-Conjugated Polymers via Direct Arylation
ACT-C, JST
1 October 2012−31 March 2018

— Nanophotonics —

Kanemitsu, Y.
Evaluation of Nonradiative Carrier Recombination Loss in Concentrator Heterostructure Solar Cells
CREST(Core Research for Evolutional Science and Technology), JST
1 October 2011−31 March 2017

BIOINFORMATICS CENTER
— Chemical Life Science —

Ogata, H.
Neo-virology, the Raison D'être of Viruses – Deciphering the Mechanisms of Virus-host Co-existence in Aquatic Environments
Grant-in-Aid for Scientific Research on Innovative Areas
30 June 2016−31 March 2021

Ogata, H.
Probabilistic and Statistical Theory on Non-Abelian Topological Semigroup A* and Its Application to Environmental Microbiology and Bioengineering
Grant-in-Aid for Scientific Research (B)
19 July 2016−31 March 2019

Ogata, H.
A Holistic Ecosystemic Investigation on Marine Giruses, Virophages and Their Eukaryotic Hosts
Grant-in-Aid for Scientific Research (C)
1 April 2014−31 March 2017

Ogata, H.
Are Viruses Elementary Particles that Generate and Maintain the Diversity of Marine Organisms?
Pursuit of Ideal, CANON Foundation
1 April 2014−31 March 2017

Goto, S.
Development of Integrated Proteome Database jPOST
Database Integration Coordination Program, JST
1 April 2015−31 March 2018

Goto, S.
Bioinformatics for Marine Microbial Genomes and Environmental Data
CREST (Core Research for Evolutional Science and Technology), JST
1 October 2012−31 March 2017

Goto, S.
Elucidation on Evolutionary Mechanisms of Antigenic Variation Gene Families
Grant-in-Aid for Scientific Research (B)
1 April 2014−31 March 2018

— Bio-knowledge Engineering —

Mamitsuka, H.
Reinforcement of Resiliency of Concentrated Polymer Brushes and Its Tribological Applications
Strategic Basic Research Program, ACCEL, JST
1 September 2015−31 March 2020

Mamitsuka, H.
Efficiently Inferring Factors Embedded in Multiple Data Matrices
Grant-in-Aid for Scientific Research (B)
1 April 2016−31 March 2019

Yotsukura, S.
Feasibility Study of Allergen Genes Identification and Prediction of the Gene Expression Level Associated with Cultivation Conditions
Specific Project Investigation, JST
1 October 2016−31 March 2017

Yamada, M.
Nonlinear Feature Selection for Ultra-High Dimensional Data
Grant-in-Aid for Young Scientists (B)
1 April 2016−31 March 2018

Yamada, M.
Nonlinear Feature Selection for Science Discovery
PRESTO (Precursory Research for Embryonic Science and Technology), JST
1 December 2016−31 March 2020